

REMARKS

Claims 23-28 are pending for further examination. Claims 29 and 30 have been canceled.

In the final Office action, claims 23, 25, 26 and 28 were rejected as anticipated by Yamada et al. (JP 2000-173766) and claims 23, 24 and 27 were rejected as anticipated by Badehi (U.S. Patent Appl. No. 2001/0018236).

Amendments should be entered

Applicants have amended independent claim 23 to include the subject matter of canceled claims 29-30 and respectfully request entry of the amendments and withdrawal of the rejections. Applicants note that claim 30 was not rejected by the Badehi patent in the final Office action and, at least for this additional reason, the rejection of claim 23 as anticipated by the Badehi patent should be withdrawn.

1) Claim 23 now recites, in part, an optical semiconductor device that includes a sealing resin which covers “side surfaces of [a] covering layer” and a “boundary between [an] optical semiconductor element and the covering layer.” For example, lines 17-24 on page 11 of the specification disclose that side faces of optical semiconductor element 11 and covering layer 12 are covered with a sealing resin 16 and that an interface portion between the optical semiconductor element 11 and the covering layer 12 is also covered with the sealing resin 16. Accordingly, in some implementations, the resin 12 may prevent foreign particles from entering into the interface portion, which would otherwise damage the optical semiconductor element 11. The resin also may improve the resistance of the device to water and increased moisture.

In contrast, the JP 2000-173766 reference does not disclose or suggest a sealing resin that covers “side surfaces of [a] covering layer” or a “boundary between [an] optical semiconductor element and the covering layer.” As FIGS. 7(a) and 7(b) of the JP 2000-173766 reference clearly show, the sealing resin layer 33 does not, in any way, cover the sides of transparent substrate 1 or a boundary between elements 2-6 (which the Office action alleges corresponds to

the claimed optical semiconductor element) and the transparent substrate 1. Additionally, the points at which the transparent substrate 1, counter-electrode 6 and resin-seal layer 33 meet do not correspond to a “boundary between an optical semiconductor element and a covering layer” as asserted by the final Office action (*see* pg. 4, Office action). In particular, the points at which the substrate 1, counter-electrode 6 and resin layer 33 meet are merely the intersection of three different materials and do not indicate the boundary between the substrate 1 and elements 2-6 of the JP 2000-173766 reference.

Furthermore, the Badehi patent also does not disclose or suggest the features recited in present claim 23. Claim 23 recites the optical semiconductor device includes a covering layer “made of a transparent material.” In contrast, the spacer 116 of the Badehi patent, which the Office action alleges corresponds to the claimed covering layer (pg. 4, Office action), is neither a covering layer nor transparent. Instead, the spacer 116 is formed of photoresist which, as known by those of ordinary skill in the art, absorbs light.

2) The Office action alleges that the phrase “exposed from the sealing resin” as recited in present claim 23 (in reference to terminal portions of the optical semiconductor device) should instead be interpreted as “exposed to the sealing resin” (pgs. 3, 5-6, Office action). Applicants respectfully disagree. In view of the specification, these phrases have distinct and separate meanings. FIGS. 5A and 5B of the present application clearly show that terminal portions 17 have regions “exposed from” the resin 16. In other words, a part of the sealing resin 16 that covers terminal portion 17 has been removed so that a surface of the terminal 17 is *not covered* by the sealing resin 16. In contrast, the phrase “exposed to,” as suggested by the Examiner, implies that the terminal portions 17 are merely *in contact with* the sealing resin 16.

Subsequently, the Office action alleges (pg. 3) that the counter-electrode 6 of the JP 2000-173766 reference is exposed to the resin 33 at the front and near the back of the device. In view of the foregoing discussion, that assertion is incorrect. The counter-electrode 6 is exposed from resin 33 only *near the front* of the device at the interface between the counter-electrode 6 and the transparent substrate 1.

Similarly, the Office action asserts (pg. 5) that the electrical contact 108 of the Badehi reference is exposed to the epoxy 104. This is also incorrect. While the element 108 may be in

contact with the epoxy 104, no part of the epoxy 104 has been removed to uncover a surface of element 108. Therefore, the contact 108 of the Badehi patent is not exposed from the epoxy 104.

3) In addition, the Office action alleges (pg. 6) that the term “near” as recited in claim 23 is a term of relative degree and thus introduces indefiniteness. Applicants respectfully disagree. The fact that claim language, which includes a term of degree, may not be precise, does not automatically render the claim indefinite. Instead, acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification (*see MPEP § 2173.05(b)*). In view of FIGS. 1A-1B and 5A-5C of the present application, it is clear to one of ordinary skill in the art that the front of the optical semiconductor element corresponds to the region where light is emitted or received and, therefore, the terminals 17 are located “near the back” of the optical semiconductor element. In contrast, the portion of counter-electrode 6 of the JP 2000-173766 reference, which the Office action alleges corresponds to the claimed terminal portion “exposed from the sealing resin near the back of the optical semiconductor element,” is exposed *near the front* of the device and is in contact with the transparent substrate 1.

Claim 23 should be allowed for at least the foregoing reasons.

Claims 24-28 depend from claim 23 and should be allowed for at least the same reasons as claim 23.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

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No fee is believed due. However, please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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